In the Claims:

1. (Original) A modem comprising:

a first transformer comprising a first coil, a second coil and a third coil;

a second transformer comprising a fourth coil and a fifth coil;

said fifth coil and said third coil comprising a receive path operatively coupled to a receive port;

said fourth coil and said second coil comprising a transmit path operatively coupled to a transmit port;

said transmit path further comprising an active impedance element introducing a loss onto said receive path; and

said third and fifth coils introducing a gain into said receive path.

2. (Original) The modem of claim 1, wherein said modem comprises an xDSL modem.

3. (Original) The modem of claim 1, wherein said transmit port comprises a differential transmit port.

4. (Original) The modem of claim 1, wherein said gain offsets said loss.

5. (Original) The modem of claim 1, wherein said gain is created in said third coil and comprising more windings than said first and second coils and said fifth coil comprising more windings than said fourth coil.

6. Canceled

7. (Currently Amended) The modem of claim ~~[[6]]~~ 1 wherein said receive port comprises a differential port.

8. (Original) The modem of claim 1 wherein said transmit path further comprises a power amplifier.

9. (Original) The modem of claim 1 wherein said first, second and third coils comprise windings in a ratio of 1:1:α.

10. (Original) The modem of claim 1 wherein said fourth and fifth coils comprise windings in a ratio of 1:α.

11. (Original) The modem of claim 10 wherein said first, second and third coils comprise windings in a ratio of 1:1:α.

12. (Original) The modem of claim 11 wherein α is between approximately 2 and 3.

13. (Original) A method of using a modem, comprising:

receiving a signal over a transmission line;

coupling the signal through a first transformer to a transmit path and a receive path; and

coupling the signal from the transmit path to the receive path with a second transformer to reduce losses introduced by an active impedance element in the transmit path.

14. (Original) The method of claim 13, wherein coupling the signal through a first transformer comprises coupling the signal from a first coil to a second and third coil.

15. (Original) The method of claim 14, wherein said third coil comprises a larger number of windings than said first coil.

16. (Original) The method of claim 13, wherein coupling the signal from the transmit path to the receive path comprises coupling the signal from a first coil to a second coil.

17. (Original) The method of claim 16, wherein coupling the signal from a first coil to a second coil comprises coupling the signal from a first coil to a second coil that comprises more windings than said first coil.

18. (Original) The method of claim 15 further comprising passing the signal on the receive path to a receiver port.

19. (Original) A transformer positioned in a modem, said transformer comprising:

a first coil comprising a set of first windings;

a second coil comprising a set of second windings;

a third coil comprising a set of third windings;

said first, second, and third windings having a ratio of $1{:}1{:}\alpha$, wherein α is greater than 1 and said third coil is positioned in a receive path of the modem.

20. (Original) The transformer of claim 19 wherein said second coil is associated with a transmit path of the modem.

21. (Original) The transformer of claim 19 wherein said first coil is associated with a transmission line connected to the modem.

22. (Original) A modem comprising:

a first transformer having first, second, and third coils, the first coil for coupling to a network having a load impedance with a value, Z_L;

a second transformer having a fourth and fifth coil, the fifth coil operatively coupled to the third coil and forming a receive port,

a transmit power amplifier having an output coupled to the second coil through a first impedance and to the fourth coil through a second impedance; and

a third impedance coupled in parallel with the fourth coil.

23. (Original) The modem of claim 22 wherein the transmit power amplifier has an active impedance with a value of $R_0((m-1)/m)$, the first impedance has a value of R_0/m, the second impedance has a value of $K(R_0/m)$, and the third impedance has a value KZ_L.

24. (Original) The modem of claim 22 wherein each of the third and fifth coils have first ends, which are coupled together, and second ends, which form the receive port.

25. (Original) The modem of claim 22 wherein the first, second, and third coils have a 1:1:α winding ratio.

26. (Original) The modem of claim 22 wherein the second and fourth coils each have first and second ends, the output of the transmit power amplifier is coupled to the first end of the second coil through the first impedance and coupled to the first end of the fourth coil through the second impedance, and further comprising a second transmit power amplifier having a second output coupled to the second end of the second coil through a fourth impedance and to the fourth coil through a fifth impedance.

27. (Original) The modem of claim 26 wherein each transmit power amplifier has an active impedance with a value of $R_0((m-1)/m)$, the first and fourth impedances each have a value of R_0/m, the second and fifth impedances each have a value of $K(R_0/m)$, and the third impedance has a value KZ_L.